

**Washington State Department of Transportation (WSDOT)**  
**Research Workshop for Selected Topics**  
**July 27, 2006**  
**Agenda**

Meeting Purpose: To help WSDOT identify and assess potential research needs in the areas of environment, design safety and for the Washington State Ferries.  
(Allocation of Time for Discussion is estimated)

**Introductions** 9:00

Overview of Meeting Rhonda Brooks

**A. WSDOT Design Safety** Ken Smith 9:30  
Dick Albin

A-2 Barrier Design for Large Trucks Dave Olson  
A-3 Performance Measures for Safety Program  
A-4 In-Service Performance Analysis of Barrier Systems  
A-5 Median Crossover Analysis Phase III  
A-6 Pedestrian Accidents  
A-7 Impact of Truck Safety Inspections on Accidents  
A-8 Roadside Safety Hardware/Features and Fatality Reduction  
A-9 Accident Frequency and Severity of Roadside Design  
A-10 Subsurface Utility Engineering  
Other research ideas

**B. WSF Operations** Melissa Johnson 11:00

B-1 Drive Around Analysis

**B. WSF Terminal Engineering** Tom Bertucci/Greg Trisko 11:15

High Priority

B-2 Tidal Recurrence Charts  
B-2 Berthing Criteria - Probabilistic Design and Field Verification  
B-2 Seismic Design Levels for Passenger and Vehicle Structures  
B-2 Pile Jetting - Fish and Geotech Friendly

Medium Priority

B-3 Composite Piles  
B-3 Pile to Cap Connection Alternatives

Low Priority

B-4 Local Wind and Wave Data

B-4 Scour Protection of Terminals Using Concrete Armor Units  
B-4 Effects of Ferry Induced Scour on Structures at WSF Terminals

**Lunch Break**

12:30

**C. WSDOT Environment Issues**

1:00

Washington State Ferries

Ellie Ziegler

C-1 Effects of Pile driving on Marine Mammals

C-1 Field Trial of Solar Tubes/Artificial Lighting for Eelgrass and Fish Migration

C-1 Acoustic Tagging Study

C-1 Stormwater Treatment at Ferry Docks

Other Research Ideas

Environmental Service Office

C-2 Highway Runoff Treatment System Performance

Mike Stephens

C-2 Impacts to Salmonids and Other Species from Highway Runoff

Paul Wagner

C-2 Archaeology Test Methods/Deep Testing Protocols

Rhonda Brooks

C-3 River Mechanics/Streambank Protection/Scour Repair

Rhonda Brooks

C-3 New Techniques for Environmental Analysis/Cumulative Impacts

Paul Wagner

C-3 Hazardous Materials Research

David Moore

C-3 Noise wall and micro-topographic effects of air toxics dispersion

Mia Waters

-Development of air quality emission factors for alternative fuel use  
and hybrid vehicles (different percentages of biodiesel, ethanol,  
CNG, partial electric, etc)

-Sensitivity analysis of PM2.5 dispersion using existing modeling tools

Other Research Ideas

**Adjourn**

4:00